Measurement of Total organic carbon (TOC) species

INVENTOR: Dr. Purnendu KDasgupta

TECHNOLOGY NEED
Extremely pure water is a critical requirement in many modern industries such as semiconductor, Pharmaceutical etc. Ultra-pure water is treated to the highest levels of purity for all contaminants types including: organic and inorganic compounds. Hence, the measurement of Total organic carbon (TOC) is frequently performed in environmental, clinical, and industrial settings. However, with the current methods; it is difficult to trace the TOC that is present in the pure water. Hence there is a need for a technology that can continuously monitor the traces of TOC with real time output.

INVENTION DESCRIPTION/SOLUTION
Researchers here at UTA, have designed a novel method for the continuous measurement of total organic carbon in pure water. This method can be incorporated into pure water systems after knowing site specific calibration. Such a device can be used with a secondary analyzer and the potential sources of elevated TOC can be identified. This method also gives real time output that will detect when the system reached its equilibrium.

APPLICATIONS
- Process analyzer
  - pH analyzer, Total organic carbon analyzer
- Ultrapure Water Purification systems
  - Used as front end cleaning tool in the Semiconductor industry
  - Pharmaceuticals and biotechnology

KEY BENEFITS
- Real time monitoring.
- Low cost and easy integration
- Continuous monitoring

STAGE OF DEVELOPMENT
Prototyped and Tested

INTELLECTUAL PROPERTY STATUS
Provisional

RELATED TECHNOLOGY
UTA 13:29 CAVITY ENHANCEMENT METHODS, SYSTEMS AND DEVICES, AND METHODS OF MEASURING SAME